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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/733,820

12/12/2003

John Charles Calhoon

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EXAMINER

BERHANU, SAMUEL

ART UNIT

PAPER NUMBER

2838

DATE MAILED: 08/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/733,820

Applicant(s)

CALHOON ET AL.

Examiner

Samuel Berhanu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-21 and 28-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-21 and 28-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 8 is rejected under 35 U.S.C. 102(e) as being anticipated by Lyon (US 2004/0145342).

Regarding Claim 8, Lyon discloses in Figure 2, an apparatus configured for receiving inductive energy, comprising: a memory for storing computer readable data (238) relevant to receiving the inductive energy, a processor unit (240) for processing the computer readable data; a coil configured for receiving the inductive energy (232) and for receiving an inductive data communication (data and power are coupled inductively, Paragraphs 0023 and 0025), a power supply (230) operatively coupled to the processor unit and the coil; the power supply configured to output a direct current(rectifier) powered by the inductive energy', and relevant to the inductive data communication ; a battery charge (230) for supplying energy to a separate battery pack (225), and a connector (the battery charging circuit (230) and the battery (234) are

electrically connected for operatively receiving a portion of a battery pack for logical communications with the processor unit.

3. Claim 8 is rejected under 35 U.S.C. 102(b) as being anticipated by Parks et al. (US 5,455,466).

Regarding Claim 8, Parks et al disclose in Figures 1 and 2 an apparatus configured for receiving inductive energy, comprising: a memory for storing computer readable data (228) relevant to receiving the inductive energy; a processor unit (228) for processing the computer readable data; a coil configured for receiving the inductive energy (200b) and for receiving an inductive data communication (data and power are coupled inductively, see abstract); a power supply (operatively coupled to the processor unit and the coil (Column 3, lines 61-67, Column 4, lines 1-4); the power supply configured to output a direct current powered by the inductive energy (Column 2, lines 43-49) and relevant to the inductive data communication ; a battery charge (224) for supplying energy to a separate battery pack (225); and a connector (the battery charging circuit (224) and the battery (225) are electrically connected)for operatively receiving a portion of a battery pack for logical communications with the processor unit.

Regarding claim 10, Parks et al disclose a communications device (220) operatively coupled to the pickup coil (220).

Regarding claim 11, Parks et. al. disclose the communications device (220) is configured to receive the computer readable data and transmit the data to the coil (200b).

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4. Claims 9, 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parks et al. (US 5,455,466) in view of Stobbe (US 6,275,143).

Regarding claim 9, Parks et al. do not disclose explicitly, the processor unit is configured to provide authentication data for inductive energy reception. However, Stobbe discloses the apparatus in which the processor unit is configured to provide authentication data for inductive energy reception (Column 6, lines 5-20). It would have been obvious to a person having ordinary skill in the art at the time of the invention to implement authentication data transfer means in Parks et al. inductive coupling system as taught by Stobbe in order to protect against unintentional or against unwanted battery charging.

Regarding claim 13, Stobbe discloses the processor unit is configured to provide a digital certificate to a power source (Column 6, lines 5-20).

Regarding claim 15, Stobbe discloses the antenna (52) and a communications device (22,24) configured to receive the computer readable data and configured to transmit the data to the antenna for wireless data communications to a power source (Column 5, lines 35-45).

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Parks et al. (US 5,455,466) in view of Stobbe (US 6,275,143).

Regarding claim 12, Parks et al. do not disclose explicitly, the processor unit is configured to receive a plurality of power parameters from the battery pack; store the power parameters in the memory; and transmit the power requirements to a power source, which provides inductive energy. However, Wendelrup et al. disclose in Figures

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1 and 2 processor unit (114) is configured to receive a plurality of power parameters from the battery pack (113); store the power parameters in the memory (116); and transmit (117,106) the power requirements to a power source, which provides inductive energy (Column 4, lines 31-52). It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify Parks et al. inductive coupling system in order to transmit battery parameter to electrical source as taught by Wendelrup et al. to provide effective battery monitoring system.

6. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Parks et al. (US 5,455,466) in view of Garcia et al. (5,963,012).

Regarding claim 14, Parks et al. do not disclose explicitly, the processor unit is configured to draw electrical power from the battery pack; and responsive to receiving an indication of inductive energy at the coil; the processor unit configured to draw electrical power via the coil. However, Garcia et al. disclose in Figure 2 and 3, the processor unit (310) is configured to draw electrical power from the battery pack (304) and responsive to receiving an indication of inductive energy at the coil the processor unit configured to draw electrical power via the coil (208) (column 3, lines 17-52). It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify Parks et al. inductive coupling system in order to transmit battery parameters to control unit as taught by Graci et al. so that the device can make any necessary charging adjustments.

7. Claims 16, 17, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garcia et al. (US 5,963,012) in view of Gosior et al. (US 2002/0159434) and in view of Stephens (US 5,734,254).

Regarding claim 16, Garcia et al. disclose in Figures 2 and 3 a computer implemented method of providing battery assembly, a coil (204, 208) wirelessly receiving a polling message from a source (Column 2, lines 47-59), transmitting a request for power to the source responsive to receiving the polling message; and receiving inductive power via the coil from the source (Column 2, lines 30-59, Column 4, lines 7-41); the battery pack (304) being detachable from the battery charger assembly (302) (noted that the charger could be inductive charger in which the battery pack is separated from the charger, see column 3, lines 13-14). Garcia et al. do not disclose the polling message including a data structure having a header and a payload; and outputting a direct current powered by the received inductive power; and supplying the direct current to a separate battery pack. However, Gosior et al. disclose in Figure 8, data communications to the battery pack based on a polling message having a data communications to the battery pack based on a polling message having a header and a payload (Paragraphs 0122). It would have been obvious to a person having ordinary skill in the art at the time of the invention to use a polling message that contains a payload, and a header as taught by Gosior et al. in Garcia et al. inductive charger system and method in order to provide an efficient and reliable data transfer means for the charger and the device or the battery pack. Further, Stephens discloses in Figures 2 and 3, and outputting a direct current powered by the received inductive power (element

230 is outputting direct current to the device battery by converting AC to DC); and supplying the direct current to a separate battery pack (10), the battery pack being detachable from the battery charger assembly (the battery pack is physically isolated from the inductive charging source). It would have been obvious to a person having ordinary skill in the art at the time of the invention to use an AC/DC power converter in Garcia et. al inductive charger as taught by Stephens in order to regulate charging current, and maintain the charger current at a desire charging point for safety purpose.

Regarding claims 17 and 21, Garcia et al. disclose the step of transmitting includes a step of transmitting power parameters to the source (column 2, lines47-59).

8. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Garcia et al. (US 5,963,012) in view of Gosior et al. (US 2002/0159434), in view of Stephens (US 5,963,012) as applied to claim 16 above, and further in view of Stobbe (US 6,275,143).

Regarding claim 18, Garcia et al., Gosior et al. and Stephens do not disclose explicitly, the step of transmitting includes a step of transmitting authenticating data to the source. However, Stobbe discloses the step of transmitting includes a step of transmitting authenticating data to the source (Column 6, lines 5-20). It would have been obvious to a person having ordinary skill in the art at the time of the invention to implement authentication data transfer means in Garcia et al. wireless battery charging system as taught by Stobbe in order to protect against unintentional or unwanted battery charging.

9. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Garcia et al. (US 5,963,012) in view of Gosior et al. (US 2002/0159434), in view of Stephens (US 5,963,012) as applied to claim 16 above, and further in view of Parks et al. (US 5,455,466).

Regarding claim 19, Garcia et al., Gosior et al. and Stephens do not disclose explicitly, a step of initiating a step of converting the inductive power to a direct current responsive to the step of receiving. However, Parks et al. disclose in Figure 1 a step of initiating a step of converting the inductive power to a direct current responsive to the step of receiving (Column 2, lines 35-50). It would have been obvious to a person having ordinary skill in the art at the time of the invention to add a charging rectifier circuit in Garcia et al wireless battery charging system as taught by Parks et al. in order to supply direct current appropriate for charging the battery pack.

10. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Garcia et al. (US 5,963,012) in view of Gosior et al. (US 2002/0159434), in view of Stephens (US 5,963,012) as applied to claim 16 above, and further in view of Wendelrup et al. (US 6,291,966).

Regarding Claim 20, Garcia et al., Gosior et al. and Stephens do not disclose explicitly, step of receiving power parameters from battery pack and storing the power parameters in a computer readable memory. However, Wendelrup et al. disclose step of receiving power parameters from battery pack (113) and storing the power parameters in a computer readable memory (116). It would have been obvious to a person having ordinary skill in the art at the time of the invention to add a computer data

storage element as taught by Wendelrup et al. in Garcia et al device in order to monitor battery status.

11. Claims 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lyon (US 2004/0145342) in view of Gosior et al. (US 2002/0159434).

Regarding Claim 28, Lyon does not disclose explicitly, the inductive data communication includes a polling message including a header and a payload. Gosior et al. disclose, the inductive data communication includes a polling message including a header and a payload. It would have been obvious to a person having ordinary skill in the art at the time of the invention to use a polling message that contains a payload, and a header as taught by Gosior et al. in Lyon's adaptive charger system and method in order to provide an efficient and reliable data transfer means for the charger and the device or the battery pack.

Regarding Claim 29, Lyon discloses, wherein the payload includes at least one of an operating parameter and authentication information (Paragraphs 0033).

Regarding Claim 30, Lyon discloses, wherein the payload contains specific data relevant to power consumption (Paragraphs 0033)

Regarding Claim 31, Lyon discloses wherein the operating parameter corresponds to a charging voltage or a maximum expected power consumption (Paragraphs 0033).

Response to Arguments

12. Applicant's arguments filed 06/09/2006 have been fully considered but they are not persuasive.

Applicant argues that neither Parks et. al nor Lyon teach or suggest a battery charger for supplying energy to a separate battery pack, and a connector for receiving a portion of the battery pack. This is incorrect.

Parks et. al. disclose in Figure 2, that the battery pack (225) is separated from the charging source 14, and a wire connector is provided to establish an electrical connection between the battery charging circuit (224) and the battery, the elements have an electrical connection with the processor 228, see also paragraph 3 above.

Lyon discloses in Figure 2, that the battery pack (234) is separated from the charging source 106, and a wire connector is provided to establish an electrical connection between the battery charging circuit (230) and the battery, the elements have an electrical connection with the processor 240, see also paragraph 2 above

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel Berhanu whose telephone number is 571-272-8430. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Karl Easthom can be reached on 571-272-1989. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SB


KARL EASTHOM
SUPERVISORY PATENT EXAMINER